

State of Kansas



DEPARTMENT OF HEALTH AND ENVIRONMENT

Division of Environment
TOPEKA, KANSAS 66612

PUBLIC WATER SUPPLY

PERMIT APPLICATION: PART 1

Date: _____

To the Secretary, Department of Health and Environment, Topeka, Kansas:

In conformance with the provisions of Kansas Statutes Annotated 65-163

Name of Municipality, Institution, District, Company, Corporation or Person

hereby makes application to the Department of Health and Environment for a permit, or additional permit due to proposed change in source, storage, or treatment, to supply water for domestic purposes to the public within the State of Kansas, in accordance with the information herein contained and with the accompanying maps, plans and specifications, which are made a part of this application.

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The following questions are designed to meet the requirements of widely varying conditions. Answers are desired to all applicable questions.

GENERAL

1. Type of facilities to be constructed: _____

2. Give population to be served: _____

SOURCE OF SUPPLY – SURFACE-WATER SUPPLY

3. In case the proposed supply is to be taken from a river or creek, furnish the following information:
 - (a) Name of stream _____
 - (b) Drainage area above intake, in square miles _____
 - (c) Approximate minimum flow of stream _____
 - (d) Location of intake with reference to potential sources of pollution _____

- (e) Furnish map of general layout, together with plans of intake, suction line, dam, intake well, and all other devices to be used in taking water from the river, and specifications for their construction.
- (f) Remarks _____
4. In case the supply is to be taken from an impounding reservoir, furnish information as follows:
- (a) Area of water surface when reservoir is full, in acres _____
- (b) Maximum and average depth of water in reservoir, when full:
Maximum _____ Average _____
- (c) Approximate holding capacity of reservoir when full, in gallons _____
- (d) Name of creek tributary to reservoir, and its drainage area in acres or square miles _____
- (e) Average yearly rainfall over drainage area _____
- (f) Nature of drainage area:
smooth or rough _____ sand or clay _____
percent of tilled land _____ percent of grass land _____
percent of timbered land _____
- (g) What measures will be taken to protect the drainage and reservoir from contamination? _____
- (h) What measures are proposed for protecting the supply from excessive plant and algae growths in shallow water? _____
- (i) Furnish (1) a map of the drainage area, showing the location of all public roads and railroads; all residences, animal feedlots, and picnic or camping grounds within the limits of the area; (2) a large-scale contour map of the reservoir area; (3) plans of the dam, spillway, blow-off or drain, and intake arrangement, together with specifications for their construction.

SOURCE OF SUPPLY – GROUND-WATER SUPPLY

5. In case the proposed supply is to be taken from wells, furnish information as follows:
- (a) Number of wells available at present _____

- (b) Number of wells to be constructed _____
- (c) Location of well(s) to be constructed ($\frac{1}{4}$ $\frac{1}{4}$ section, twp., R) _____

- (d) Diameter and depth of each new well _____

- (e) Log of the well or test holes _____

- (f) Description of the aquifer from which the supply of water is to be obtained _____

- (g) State type of well casing and its diameter, length, thickness and weight per foot _____

- (h) State means employed to facilitate the entrance of water into the well from the aquifer. If a well screen is to be used, give length, type of material and size of openings _____

- (i) Give detailed results of any preliminary tests that have been made to determine the yield of the proposed wells, or any data that might be used in estimating such yields _____

- (j) Furnish large-scale map showing general layout of wells, together with plans and specifications for the construction of wells, well house, pumping equipment and appurtenances.
6. In case the proposed supply is to be derived from springs, furnish information as follows:
- (a) Character and thickness of aquifer from which springs apparently flow _____

- (b) Results of any measurements or tests that have been made to determine the yield of the proposed springs or any data that might be used in estimating such yield _____

- (c) Furnish large-scale map showing general layout of springs, and plans and specifications for the construction of whatever collecting chambers, tunnels, weirs and conduits are to be used to collect or store the water from the springs and convey it to the point of use.
7. In case the supply is to be collected from an underground source by means of infiltration galleries, collecting pipes or tunnels, or similar devices, furnish the following information:
- (a) Description and depth of aquifer from which supply is collected _____

- (b) Character and thickness of each stratum of material encountered, from the surface of the ground down to the aquifer from which the water is to be obtained _____

- (c) Give results of any tests that have been made to determine the probable yield of water from the proposed construction, or any data that might be used in estimating such yield _____

- (d) Furnish large-scale map showing general layout of collecting system, together with plans and specifications for the construction of collecting pipes, tunnels, or galleries, and of whatever weirs, conduits and other devices may be employed.
8. Are there any cesspools, septic tanks, sanitary sewers, feedlots, underground storage tanks for petroleum products or chemicals, or other sources of pollution within 600 feet of site of proposed supply? _____
If so, specify each, or show location on a map _____

9. Are there any salt or oil wells in the vicinity that would be likely to injure the supply? _____

10. Is there to be an auxiliary supply for emergency use, as in case of large fires? _____

If so, describe source of such supply, the connection of the same with the pumping plant, and the conditions under which it is to be used: _____

PURIFICATION

11. State briefly the treatment processes to be used _____

12. State basis of design of treatment works as to capacity _____

13. In case of aeration, give type and location of aerator _____

14. In case of preliminary sedimentation, give type, capacity, theoretical detention, overflow rate and weir loading of basin: _____

15. In case of sedimentation with coagulation, furnish information as follows:
- (a) Chemicals used _____
 - (b) Points of application of chemicals, and facilities for feeding, mixing and flocculating: .

 - (c) Capacity, theoretical detention, overflow rate and weir loading of basin: _____

 - (d) Type of sludge disposal _____
16. In case of filtration furnish information as to the following:
- (a) General type of filter _____
 - (b) Number and dimensions of filter units _____
 - (c) Type and source of filter media _____

 - (d) Depth of filter media _____

- (e) Type of underdrain _____
- (f) Quantity and source of wash water _____
- (g) Filter equipment (gauges, controllers, etc.) _____
- (h) Type and capacity of clearwell _____

17. Chlorination is required. Give information on chlorination equipment:

- (a) Make, model and capacity of equipment _____

- (b) Place of application _____

18. What laboratory facilities and equipment are to be provided? _____

- (a) Make and range of chlorine residual test kit _____
- (b) Other _____

19. Are daily operation records to be maintained? _____

Specify items to be recorded _____

20. Furnish general plans of the purification plant, showing relative locations and elevations of settling basins, filters, chemical feeds, clearwell, flood protection arrangements, and other general features of the plant, indicating all pipe connections. Also, furnish detailed drawings in all cases in which these are essential to the proper understanding of the plant.

PUMPING AND DISTRIBUTION

21. Low service pumps:

- (a) Type and capacity of each in gallons per minute _____

- (b) Suction lift in feet: ordinary _____; maximum _____
- (c) Discharge head in feet _____

22. High service pumps:

- (a) Type and capacity of each in gallons per minute _____

- (b) Suction lift in feet: ordinary _____; maximum _____
- (c) Discharge head in feet _____

23. In regard to the pipe system for distributing the supply, furnish information as follows:

(a) Total length of each size of pipe in entire system:

1-inch _____ ft 4-inch _____ ft 10-inch _____ ft _____ ft
2-inch _____ ft 6-inch _____ ft 12-inch _____ ft _____ ft
3-inch _____ ft 8-inch _____ ft _____ ft _____ ft

(b) Type of pipe to be used _____

(c) Is any portion of the pipe system to be carried over a stream on a bridge, or otherwise to be exposed? _____

If so, give methods to be used to prevent freezing _____

(d) Number of fire hydrants _____

(e) Number of flushing hydrants _____

24. In case an elevated tank or standpipe is to be used, give the following information:

(a) Diameter and height, in feet _____

(b) Capacity, in gallons _____

(c) Height of top of tank or standpipe above foundation _____

(d) Height of top of tank or standpipe above area of major use _____

(e) How is tank or standpipe to be covered? _____

(f) High water level with respect to existing tanks _____

(g) Capacities of existing tanks _____

25. If a pressure tank is to be used, give size, and pressure range _____

26. In case a ground level or below ground level reservoir is to be used, give information as follows:

(a) Shape, dimensions, and capacity when full _____

(b) Height of water level, when reservoir is full, above area of major use _____

(c) Is a provision to be made to cut out the service reservoir in case of fire, and operate under direct pump pressure? _____

27. Furnish plans showing all details of the facility for which this application is made such as, source of supply, transmission main, distribution system, and water storage tanks. Also furnish specification for all equipment included in the project and for all installation procedures where applicable.

28. Give name of person or firm responsible for engineering _____

29. How and by whom is the work of construction to be supervised? _____

30. Give name of well driller: _____

AUTHORITY

31. Name and address of proper official to be contacted: _____

Signature of proper official _____

State of Kansas, County of _____, ss.

SWORN TO AND SUBSCRIBED before me, a notary public in and for said county and state, this

_____ day of _____.

(SEAL)

Notary Public

My commission expires _____

State of Kansas



DEPARTMENT OF HEALTH AND ENVIRONMENT

Division of Environment
TOPEKA, KANSAS 66612

Public Water Supply

PERMIT APPLICATION: PART 2

TECHNICAL, FINANCIAL AND MANAGEMENT CAPACITY ASSESSMENT
FOR NEW PUBLIC WATER SYSTEMS

INSTRUCTIONS

The 1996 Federal Safe Drinking Water Act (SDWA) requires each state to ensure that all new community water systems and new nontransient, noncommunity water systems commencing operations after October 1, 1999, demonstrate technical, financial, and management (TFM) capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the day of commencement of operations.

This form is one of the tools the Kansas Department of Health and Environment (KDHE) is using to assess the TFM Capacity of new public water systems. This form is a required part of the permit application process. Failure to complete the form and return it to the Department will prevent the Department from assessing the TFM Capacity of that public water system and effectively prohibit the Department from issuing a permit to the water system. KSA 65-163 expressly prohibits a person from operating a public water system unless he or she is first receives a permit to do so from the Department.

All new public water systems applying for a water supply permit in accordance with KSA 65-163 must possess some elements of TFM Capacity at the time the permit application is filed with the Department. These elements are labeled “Capacity Elements Required at the Time of Application” in this form. Other elements are not necessary at the time of the permit application but must be developed by the water system in an agreed upon time frame. These elements are labeled “Capacity Elements Required to be Developed” in this form. The schedule for development of these elements will be placed in the permit issued to the water system as legally enforceable directives.

TECHNICAL CAPACITY

A. Operations Plan

A comprehensive water system operations plan is necessary to ensure all operational personnel (full time, part time, on call, and new employees) have a standard set of procedures for operation of the water system.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame.

- ☐ An operations plan that addresses how the system will be operated to comply with drinking water requirements and the waterworks standards. The plan must address the following items, if applicable:
- a) Operational objectives.
 - b) Daily operational practices for your water system.
 - c) Emergency operational practices for your water system.
 - d) Flushing dead-end mains.
 - e) Reservoir inspections and cleaning.
 - f) Main repair and replacements.
 - g) Responding to consumer complaints.
 - h) Maintenance and testing of backflow prevention devices.
 - i) Inspecting and exercising water main valves.
 - j) Maintenance of master flow meters.
 - k) Responsibilities, qualifications, and training of operating personnel.
 - l) Operation of all production, treatment, and transmission and distribution facilities.
 - m) Record keeping.
 - n) A maintenance plan for all facilities.

B. Certified/Qualified Operators

The statutory requirement, KSA 65-4501, et seq., requires certified operators for public water systems. It is essential that all community and non-transient non-community public water systems be under the operational control of an appropriately certified operator in order to assure reliable compliance with drinking water standards.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame.

- ☐ Provision of appropriately certified/qualified operator(s) who are responsible for the day to day operation of the water system.

C. Training/Experience

Competent management and operation of a public water system are critical in providing a safe and potable water supply to system customers. In order to reliably comply with existing requirements and stay current with new requirements, new technologies, and new hazards, all water system personnel must be adequately trained with a commitment to obtain continuing education as necessary.

Capacity Elements Required to be Developed:

The items listed below are not necessary at the time of application but must be developed in an agreed upon time frame. If, however, your water system already has any of the items listed below, check the applicable box and attach them to this form.

- ☐ Documentation of the relevant training and experience of individuals responsible for the management of your water system.
- ☐ Documentation of the relevant training and experience of individuals responsible for the operation of your water system.
- ☐ A plan for keeping the system management current with the requirements of managing the water system.
- ☐ A plan for keeping the system operator(s) current with the requirements of operating the water system.

FINANCIAL CAPACITY

A. Budget Projection

The budget projection is a written financial plan for the operation of the water system over the next five years. This is a critical feature of the TFM capacity assessment because it indicates whether the system's revenues and reserves will meet the system's expenses. It also is a necessary tool that will enable the water system to plan for future needs.

Capacity Elements Required at the Time of Application:

- ☐ Five-year projection of anticipated revenues and expenditures for your system. [Please complete and attach the KDHE budget projection worksheet.]

B. Revenue Determination Process

The budget projection provided above depends upon an accurate assessment of expected revenues and expenses. When new water systems are proposed there is a determination of revenues needed for sustaining operations, maintenance, debt service and reinvestment in capital facilities.

Capacity Elements Required at the Time of Application:

The information listed below must be submitted with this form as part of your permit application. Check the box if you attach the information to this form.

- ☐ A description of your system's revenue determination process.

C. Proposed Schedule and Process for Water Revenue Review

The projected budget for a new public water system is determined using the best estimates of total revenues and expenses. This budget is reviewed at the time of application to determine if the water system will have the financial capacity to sustainably provide safe drinking water to the public for the initial five years of operations. It is important for the water system to establish a schedule and process for reviewing water revenues in order to determine if adjustments need to be made.

Capacity Elements Required at the Time of Application:

The information listed below must be submitted with this form as part of your permit application. Check the box if you attach the information to this form.

- ☐ A description of your system's proposed schedule and process for reviewing water system revenue requirements.

D. Cash Management Reserves

Each public water system must have the financial capacity to provide for the ongoing operation, maintenance and emergency replacement of a major capital facility (e.g., well, a source of supply, key transmission line, or the largest piece of pumping equipment) to ensure its ability to supply a reliable source of potable water to its customers. Since it is common for some utilities to experience cash flow shortfalls due to lags in revenues or unanticipated expenses for emergencies, this element requires the utility to deal with this problem by establishing a reserve account or debt authority (e.g., trust fund, surety bond, letter of credit, insurance, etc.) equal to one and one-half times the expected average monthly operating expense of the utility.

Capacity Elements Required at the Time of Application:

The information listed below must be submitted with this form as part of your permit application. Check the box if you attach the information to this form.

- ☐ A description of your system's reserve account(s). [Please indicate the proposed cash management reserves on the KDHE budget projection worksheet.]

E. Debt Service Reserve

Public water systems that are capitalized through debt service are often required by the lender to create a debt service reserve account. Debt service reserve monies may be used to meet unanticipated shortfalls in revenues that would cause loan payments to go unpaid. *If your system is capitalized through debt service and the lender requires a debt service reserve, please indicate the debt service reserve amount on the KDHE budget projection worksheet.*

Capacity Elements Required at the Time of Application:

The information listed below must be submitted with this form as part of your permit application. Check the box if you attach the information to this form.

- ☐ This water system is required to establish and maintain a debt service reserve fund.

- ☐ A description of your system's debt service reserve account. [Please indicate the proposed debt service reserve on the KDHE budget projection worksheet.]

F. Capital Improvement/Equipment Replacement Plan

In order to provide a continuous supply of potable water to its customers, every water system must have the capacity to make needed capital improvements and replace equipment in a timely manner. The development of a prioritized capital improvement plan (CIP) is a common way for utilities to demonstrate this capacity. Improvements would be those necessary to resolve deficiencies identified in the technical evaluation as well as those necessary to accommodate growth in the system's service area. The financing plan for the CIP is then reflected in the systems operating budget in order to fully assess the financial capabilities of the utility.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame. *If, however, your water system has a Capital Improvement Plan, check the box and attach it to this form.*

- ☐ Your system's Capital Improvement/Equipment Replacement Plan

G. Budget Control

The budget of a water system is basically a financial plan for the existing and future operation of the water system. It is essential that the budget be adhered to or consciously modified to reflect a change in direction. In order to accomplish this, the water system must establish budget controls and reporting to appropriate levels of authority. There must be periodic reviews of the budget status and meetings to modify if necessary. This will assure that revenues are collected, expenses are controlled, and reserve accounts are maintained.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame. If however, your water system already has any of the items listed below, check the applicable box and attach them to this form.

- ☐ A description of your system's budget/expenditure control procedures (and associated reports).
- ☐ A description of the methods used to properly account for water system revenues and expenses.

MANAGEMENT CAPACITY

A. Organization

A clear description of the organization including a functional organization chart is essential for any organization to provide clear lines of authority and communication between management and employees and to avoid confusion, mistakes, or misunderstandings in the daily operation and management of the system. It is also essential to define the respective roles of each person to avoid duplication, confusion, and to ensure that all essential functions are covered.

Capacity Elements Required at the Time of Application:

The items listed below must be submitted with this form as part of your permit application. Check the box next to each item you submit with this form.

- ☐ A functional organization chart for your system.
- ☐ Name(s), position(s) and title(s) of those responsible for making policy decisions, for ensuring compliance with state regulatory drinking water requirements, and for day to day operations of the system.
- ☐ Duties & responsibilities of all key personnel who will be involved in the management or operation of the water system (including boards of directors or councils, employees, and contract personnel).
- ☐ *For systems with boards or councils:* Frequency of meetings.
- ☐ *If the person in charge of system operation has other responsibilities unrelated to the water system:* Description of these responsibilities and how much time is dedicated to the operation of the water system.
- ☐ *Systems that contract for system management or operation:* The contract between your water system and the contractor.

B. Ownership

In order to determine accountability for compliance with drinking water requirements, the owner(s) of the water system must be clearly identified. It is also essential that the system demonstrate that they own or control the facilities necessary for the operation of the system.

Capacity Elements Required at the Time of Application:

The items listed below must be submitted with this form as part of your permit application. Check the box next to each item you submit with this form.

- ☐ Description of the type of system ownership (e.g., sole proprietorship, partnership, corporation, mutual, governmental agency) along with the name(s), address(es), and phone number(s) of the owner(s).
- ☐ *Systems under temporary (e.g., developer) ownership:* The contract and schedule for the transfer of system ownership to the future owner.

- ☐ *Systems that use, but do not own, land or facilities that are essential to water system operation:* Term(s) of agreement for the long-term use of land or facilities not owned by the system.
- ☐ *Systems with a single proprietor:* A contingency plan for continuing operations in the event the owner becomes incapable of carrying out his/her responsibilities.

C. Water Rights/Planning

Having a legal right to the quantity of water necessary to assure an adequate and reliable drinking water supply is critical to the operation of any water system.

Capacity Elements Required at the Time of Application:

The items listed below must be submitted with this form as part of your permit application if they are applicable to your water source(s). Check the box next to each item you submit with this form.

- ☐ A copy of all water rights (i.e., permits, licenses, or other agreements) owned or controlled by your system or a letter of confirmation from the authority that granted each of your water rights.
- ☐ *If the source water is subject to permit requirements under the Kansas Water Appropriations Act [KSA 82a-701 et seq.]:* A copy of the water rights permit.
- ☐ Plan and schedule to obtain additional water rights, if needed, to serve customer growth for at least the next 10 years.
- ☐ Other – attach explanation and documents (e.g., contract for purchase of water, water marketing contract, documentation of membership in river water assurance district, etc.).
- ☐ *If applicable*, information that demonstrates that your system has complied with local land and water use plans.

D. Water Conservation Plan

A water conservation plan must be filed with and approved by the Kansas Water Office if any of the following situations apply;

- your system is purchasing water from the State of Kansas water marketing program
- your system is participating in a water assurance district
- your water right is covered by the water transfer act, or
- your system is obtaining a new water right.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame. If however, your water system already has the item listed below, check the applicable box and attach it to this form.

- ☐ Water conservation plan required by the Kansas Water Office.

E. Emergency/Disaster Response Plans

In order to provide reliable service and to minimize public health risks from unsafe drinking water during emergencies, water systems shall have a plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame. If, however, your water system already has any of the items listed below, check the applicable box and attach them to this form.

- ☐ An emergency/disaster response plan covering water outages, contamination, and other emergency situations that have historically occurred in the service area. The plan must address the following items, as applicable:
- a) All disasters/emergencies that have historically occurred in the water system's service area.
 - b) Designation of responsible personnel and provision of a clear chain of command and responsibilities.
 - c) Inventory of system resources that are used for normal operations and available for emergencies.
 - d) Communication network that describes a designated location for an emergency operations center; emergency contact information for equipment suppliers; emergency phone and radio communication capabilities; coordination procedures with governmental agencies for health and safety protection, technical, legal and financial assistance; and public notification procedures.
 - e) Emergency procedures to assess damage to water system facilities, analyze logistics on emergency supply activation and repairs, monitor progress of repairs and restoration, communicate with health officials and water users, and document damage and repairs.
 - f) Steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies.

F. Water System Governing Policies

The proper management of a public water system relies, in part, upon clear guidelines for operations. Often, these guidelines are formally expressed through the use of policy documents adopted by the management board of the system. At a minimum, a public water system shall have the following policies in place at the time of commencement of operations:

Customer Service/Marketing. A customer service policy describing how the water system proposes to interact with its customers and outlines such things as the processes for the board members and staff to use in communicating with customers, resolving complaints, bill payment and water service related issues, and the use of the consumer confidence report.

Personnel. A personnel policy that establishes the guidelines for how water system employees are hired and dismissed, guidelines for discipline and incentive programs, job descriptions and performance evaluation processes, etc.

Records/Reporting. A record keeping and reporting policy describing how information about the day-to-day operations of the public water system will be retained maintained and archived. This would include compliance information (testing results), correspondence with regulatory agencies (KDHE and/or EPA), customer related correspondence (complaints and complaint resolution information), etc.

Capacity Elements Required to be Developed:

The items listed below are not necessary at the time of application but must be developed in an agreed upon time frame. If however, your water system already has any of the items listed below, check the applicable box and attach them to this form.

- ☐ Customer service/marketing policy.
- ☐ Personnel policy.
- ☐ Records/reporting policy.

G. Governing Body Education Plan

The proper management of a public water system relies, in part, upon the ability of governing board members to keep current with regulatory requirements related to the provision of safe drinking water. A public water system shall have a plan for governing board members to gain and maintain their knowledge of water system laws, regulatory requirements, and system administration.

Capacity Elements Required to be Developed:

The item listed below is not necessary at the time of application but must be developed in an agreed upon time frame. If however, your water system already has the item listed below, check the applicable box and attach them to it form.

- ☐ Governing Body Education Plan.